CLAIMS

1. Method for temperature control of a high temperature metallic strip in a continuous metal casting plant wherein liquid metal is poured into an ingot mould preferably consisting of a pair of cooled, counter rotating rolls, solidifies upon contact with said rolls and is extracted from the ingot mould in the form of a high temperature strip, said strip following, below said ingot mould, a free path, firstly descending and then ascending forming, in such a manner a loop, passing then on a roll conveyor with cooled rolls, drawn by at least a pair of drawing rolls, and is then wound into coils by a coiling device, characterised by the stages of: (i) controlling and regulating the heat exchange towards the environment by the strip which forms the loop, (ii) controlling and regulating the supply of cooling fluid fed to said rolls in the roll conveyor, (iii) controlling and regulating the heat exchange with a series of rolls put into contact with the strip above it, (iv) recording the signals from an array of temperature sensors placed along the strip between the exit from the ingot mould and the entrance into said coiling device, and (v) sending said signals to an electronic computing device, which computes the data received and accordingly regulates the stages from (i) to (iii).

2. The method according to claim 1, wherein the heat exchange between the strip which forms the loop and the environment is regulated by modifying the length of the loop itself.

3. The method according to claim 1, wherein the position of additional cooled rolls placed above the strip in the roll conveyor is controlled and regulated from a position wherein they are detached from the strip to a position wherein they are in contact with the strip.

4. The method according to claim 1, wherein the heat exchange towards the environment of the strip which forms the loop is regulated by varying the distance between the descending and ascending sections of the strip, of the loop itself.

5. The method according to claim 1 wherein the loop itself is insulated with respect to the external environment by means of isolating materials, forming a well.

6. The method according to claim 5 in which said well can be made of thermally insulating walls placed parallel to the faces of the strip which forms said loop.

7. An implementation device of the method according to claim 1, consisting of a strip temperature control system characterised by the fact of comprising means for controlling (11) and regulating (13, 18, 19) heat exchange towards the environment of the strip (4) which forms a loop (21), means for controlling (16, 17) and regulating (9) cooling fluid supply to said rolls (7) constituting a roll conveyor, means for controlling (10) and regulating (22) the position of additional rolls (8) placed above the strip in said roll conveyor, between a position detached from the strip and a position in contact with the strip itself, means for controlling (10) the temperature at positions downstream of said loop (21), means (14, 16) for computation of the data originating from said means of temperature control and for separate control/command of each of said controlling and regulating means.

8. The device according to claim 7, comprising means for controlling (10) and regulating (15) the position of additional rolls (8) placed above the strip in said roll conveyor, between a position detached from the strip and a position in contact with the strip itself.

9. The device according to claim 7, comprising means (15) for variating the rotational speed of the crystallising rolls (2, 2') and the rotational speed of the drawing rolls (20) to regulate the length of the loop.

10. The device according to claim 7, comprising means for the variation of the reciprocal distance of the descending and ascending sections of the strip which forms the loop.

11. The device according to claim 7, wherein a well of thermally isolating material is provided under the ingot mould.

12. The device according to claim 11, wherein said well consists of thermally isolating walls placed parallel to the descending and ascending sections of the strip which forms the loop.